

The **American Fertilizer**

Vol. 96

FEBRUARY 28, 1942

No. 5



• •
NITRATE of SODA

•
SULPHATE of AMMONIA

•
ORGANIC AMMONIATES

•
SULPHUR
• •



ASHCRAFT-WILKINSON CO.

**VEGETABLE OIL MEALS
AND
FEEDSTUFFS**

Exclusive Distributors Duval Texas Sulphur

HOME OFFICE
ATLANTA, GA.
Cable Address: ASHCRAFT

OFFICES
**CHARLESTON, S. C.
NORFOLK, VA.**



THE MICROSCOPE . . .

is playing an ever increasing role in the manufacture of fertilizer. Experimentation in soil chemistry by universities and government laboratories has proved that much of the soil of the United States is deficient in BORON . . . that element in Borax essential to full plant development.

Symptoms of BORON deficiency are in many cases difficult to discover . . . but many manufacturers of fertilizer are including small amounts of Borax in their mix as recommended by their local agricultural authorities. Growers note the response of their crops . . . and realize that a mix in which Borax is included may be applied regularly with profit.

Manufacturers know that Borax with the half-century-old TWENTY MULE TEAM trademark can be depended upon for uniformity and quality.

PACIFIC COAST BORAX COMPANY • New York • Los Angeles



Plant Food *for* Fertilizer Sales

*I*N the cultivation of fertilizer orders—through sales literature—a “mixture” of advertising knowledge, a “top dressing” of skilled layout and typography plus “high content” printing, may mean the difference between a spotty crop of orders and the harvesting of a favorable yield in sales tonnage.

The selling of fertilizers of standard grades requires “that extra something” in your direct advertising to enable your brand to overcome present day competition or possible price variations.

You can profitably supplement your agents’ or dealers’ sales efforts with literature which continues to sell after the salesman has left.

May we submit our ideas and printing costs for *your* particular problem?

WARE BROS. COMPANY { PRINTING
Direct Advertising }

1330 VINE STREET :: :: :: :: PHILADELPHIA, PA.

Published every other Saturday. Annual subscription: In the United States, \$3.00; Canada and Mexico, \$4.00; other countries, \$5.00. Entered as second-class matter, January 15, 1910, at the Post Office at Philadelphia, Pa., under Act of March 3, 1879. Registered in United States Patent Office. Publication office, 1330 Vine St., Phila., Pa.



PROTECTION AGAINST ROUGH HANDLING

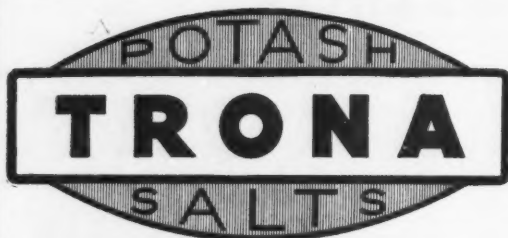
With greater responsibility being put on shipping containers by today's high speed shipping and handling, the extra strength and durability of Bemis Waterproof Bags become more and more important. Here are containers built to stand rough handling . . . to take knocks, bumps, and the strains of stacking . . . to deliver their contents safely.

And, in addition, these Bemis shipping containers can be made to keep moisture in and dampness out—retain desirable aromas and repel objectionable odors—shut out dust and dirt—resist acids and grease.



WATERPROOF DEPARTMENT BEMIS BRO. BAG CO. ST. LOUIS, MO. BROOKLYN, N. Y.

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.



AMERICAN POTASH and CHEMICAL CORPORATION

70 PINE STREET NEW YORK, N. Y.

Pioneer Producers of Muriate in America

Branch Offices

214 Walton Building
ATLANTA, GEORGIA

543 Conway Building
CHICAGO, ILLINOIS

609 South Grand Avenue
LOS ANGELES, CALIF.

MURIATE and SULPHATE of POTASH

Plant foods are urgently needed to grow the crops which feed our nation and our armed forces.

Our plant at Trona, Calif., is operating at capacity to provide supplies of these essential plant foods, and other materials needed in the national effort.

Manufacturers of Three Elephant Borax and Boric Acid

See Page 23

... THE ...

AMERICAN FERTILIZER

"That man is a benefactor to his race who makes two blades of grass to grow where but one grew before."

Vol. 96

FEBRUARY 28, 1942

No. 5

Fertilizer Company Profits

Slight Rise in Latest Reported Year, but Profit Ratio Still Low.

THERE was a slight rise in the profit ratio of fertilizer producers in 1939. Aggregate net income of the 354 companies in the industry which filed Federal income tax returns for that year totaled \$6,822,000. This was equivalent to 3.9 per cent of total gross income, compared with 3.1 per cent in 1938.

The ratio of net to gross for all manufacturing companies was 6.1 per cent.

Comparable data for fertilizer companies for the last ten years appear in the table below. Figures shown for each year include returns for fiscal years ending between July 1 of the year shown and the following June 30. The 1939 returns, therefore, include many for the year ended June 30, 1940, and reflect operations in the 1940 season more than in the 1939 season.

The Bureau of Internal Revenue classifies corporations industrially according to their predominant business. The data on fertilizer companies, therefore, presumably do not include corporations which produce fertilizer but whose business is predominantly meat packing, cottonseed oil, or some other business. The companies which are included, however, constitute a sufficiently large proportion of the entire industry to be thoroughly representative.

In the last ten years for which the figures are available, 1930 through 1939, total gross income amounted to \$1,538,811,000 and net income to \$15,772,000. For the entire period net income was equivalent to 1.02 cents for each dollar of sales. This amounts to about 25 cents per ton of fertilizer.

FERTILIZER INDUSTRY INCOME STATISTICS

Year	Total Number of Returns	Number of Returns Showing Deficits	Total Net Income or Net Deficit	Total Gross Income	Net Income in Per Cent of Gross
1930	314	137	\$ 1,270,000	\$184,910,000	0.7%
1931	308	217	d10,757,000	115,199,000	d9.3
1932	294	235	d 8,057,000	83,594,000	d9.6
1933	275	165	d 2,474,000	95,206,000	d2.6
1934	385	168	1,263,000	155,563,000	0.8
1935	401	195	3,776,000	172,996,000	2.2
1936	407	151	9,708,000	196,774,000	4.9
1937	420	162	7,971,000	188,172,000	4.2
1938	374	161	6,250,000	170,388,000	3.7
1939	354	139	6,822,000	176,009,000	3.9

d—Deficit.

Pasture Notes—No. 12

By R. H. LUSH

Pasture Specialist, The National Fertilizer Association

THE revised "Food for Victory" program calls for an almost unlimited production of livestock and livestock products. The most economical and effective way to produce more and better feed for the animals on hand is to improve pastures by fertilization. A ton of average fertilizer used on pastures will produce about 8,000 pounds of milk or 1,000 pounds of meat. This is a very profitable exchange at present prices.

Fertilize for Food Production

Dr. A. B. Beaumont says, "Most dairy farmers can now, in the emergency, use more fertilizer to advantage in growing more and better forage. Investigations over the past 20 years have shown that the yield of forage from mowings and pasture having a good sward and good moisture conditions can be increased at least 25 to 50 per cent and that the quality of the forage can be greatly improved by judicious top-dressing with lime and fertilizer or manure." He suggests that good grass swards should get at least 70 lbs. per acre of nitrogen, about two-thirds as much potash, and one-third as much phosphoric acid. Good legume swards should receive at least 100 lbs. per acre of potash, one-half as much phosphoric acid, and one-fourth or less nitrogen. If some manure is used, use less fertilizer. Lime is needed in both cases if the soil is strongly acid.

"The production of more and better forage as outlined is not only good agronomy, good economy, and a form of patriotism if you please, it is also good conservation."—*New England Homestead*, January, 1942.

Pasture Pays

The Middle Tennessee Branch Experiment Station reports that grassland has paid an average of \$15.00 per acre per year for a period of at least 10 years. An acre of good pasture at Marianna, Arkansas, produced 559 lbs. of beef; at Stuttgart, 429 lbs.; and at Hope, 379 lbs. Starting with land too poor for farming, the West Kentucky Branch Station obtained 240 lbs. of beef per acre annually for 10 years after seeding and phosphating, observes W. C. Lassetter.—*The Progressive Farmer*, February, 1942.

Good Pasture Depends on Fertility

"Beef raised in the humid South under improved pasture conditions could come closer to competing with Argentina than that of any other section of the United States. We must learn, however, that poor land produces poor grass which does not fatten—we must improve our pastures by sowing, mowing, fencing, and fertilizing," says Eugene Butler, writing of his recent trip to South America.—*The Progressive Farmer*, December, 1941.

Arkansas—Increased Lespedeza

George E. Nichols, Saline county, harvested 4,878 lbs. of lespedeza hay per acre from fertilized land as compared to only 1,394 lbs. of hay from unfertilized land depleted by row-crop farming.

Connecticut—Ladino Clover Management

In a summary of an 11-year experiment with Ladino clover, it was found to be more tolerant of acid soils than alfalfa and to thrive under conditions where the soil is too wet for red clover. It needs limestone and superphosphate, and better stands and larger yields were maintained where generous amounts of potash were also applied. The minor elements boron, manganese, and copper did not improve the growth. Ladino clover is less sensitive to frequent and ill-timed cutting or grazing than alfalfa, but should not be cut closer than four inches above the ground or late in October.—*Storrs Agr. Exp. Sta. Bul. 235*, 1941.

Georgia—Fertility Important

Good pastures can be made on upland soils, but they must be fertile or made so and adapted plants used. Good results have been obtained from the use of 300 to 500 lbs. of superphosphate or its equivalent applied broadcast every third year, and 1,000 to 2,000 lbs. of limestone applied once in four to six years where the soil requires it. Such plants as lespedeza and white clover respond to potash. Some prefer to use a complete fertilizer in establishing the pasture, says E. D. Alexander, extension agronomist.

Illinois—Better Pastures Pay

A study by Dr. W. B. Nevens, College of Agriculture, gives new evidence that good pastures mean high milk yields at relatively low feed cost, smaller labor costs, and better health for the cattle. Important practices brought out were proper grazing management, adequate and regular fertilization, and persistent weed control. Grass on fertilized plots was grazed more heavily, indicating greater palatability than on the unfertilized pasture. The increased protein content of the fertilized grass was sufficient to increase milk yields and to permit a lowering of the amounts of purchased protein supplements fed.—*Missouri Farmer*, December, 1941.

Maryland Fertilizers and Lime Make Better Pastures

A study of 20 pasture tests during 1940 and 1941 showed 4,657 lbs. hay equivalent for each acre of fertilized pasture as compared to only 1,768 lbs. for unfertilized pasture. The cost of fertilizer and lime was \$1.64 for each ton of herbage resulting from the treatment. More details are given in *Maryland Mimeo* 24.

New Jersey Pasture Cheapest Feed

Dr. George E. Taylor, extension dairyman, recommends to dairy farmers the use of lime if needed, a 500-lb. application of 5-10-10 fertilizer either in late fall or early spring; and to obtain additional early spring grazing, an additional application of 200 lbs. of one of the standard nitrogen carriers, not later than the last of March. In referring to Indiana farm cost figures, Dr. Taylor says, "It cost only one-fifth as much to produce nutrients in the form of pasture as by growing other crops. This is an item which cannot be overlooked when farmers are faced with a possible labor shortage during 1942."

Grass is Money

Prof. C. B. Bender uses the above title to emphasize the importance now of rather liberal applications of fertilizers to extend the grazing season, produce more milk and protein on fewer acres, increase the mineral content of grass, and produce more beef at lower cost.—*New Jersey Farm and Garden*, December, 1941.

New York High Quality Forage with Fertilization

Prof. F. B. Morrison states that the greatest single advance in animal husbandry for the past 30 years has been the knowledge of the importance of good forage for livestock. "As

any intelligent farmer now knows, he can produce much more feed per acre when he fertilizes and manages his fields so as to produce the best quality hay, pasturage, and silage."—*American Agriculturist*, January, 1942.

Oklahoma Pasture Supplies Vitamin A

A grade cow at the Oklahoma A & M College has consumed over 20 tons of cottonseed meal and recently gave birth to her 11th calf. Cottonseed meal like most concentrates is deficient in vitamin A, but in this experiment it was supplied by leafy prairie hay. Pasture or a bright green, cured forage are excellent sources of vitamin A.—*The Ranchman*.

Pennsylvania Improved Pastures Show High Quality

Dr. Fred V. Grau, extension agronomist, reports 1941 pasture results which show that an average of 3 tons of grass hay were produced per acre on improved pasture as compared to only 0.6 ton per acre on the unfertilized pastures. In addition, the improved pasture herbage contained nearly 8 times as much protein, phosphorus, and calcium as that of the unfertilized pastures. Ten Ladino clover-grass pastures averaged 4.2 tons of hay and 1,750 lbs. protein per acre. A herd of 10 cows, in order to be supplied with equivalent amounts of protein and mineral matter from pasture alone would have to consume all the forage on 60 acres of unfertilized pasture, or on 10 acres of improved pasture, or on only 6 acres of Ladino clover-grass pasture.

Vermont Fertilize to Save Labor

Paul Miller, extension agronomist, says that with the shortage of labor on farms, pasture improvement is of greatest importance. He suggests about 30 lbs. per acre of nitrogen fertilizer (if available) or a complete fertilizer applied early. County agents throughout Vermont plan to hold pasture improvement meetings during February and March.—*New England Homestead*, January, 1942.

Virginia Fertilizer Pays on Oats

Dr. T. B. Hutcheson writes, "Late winter—or early spring-seeded oats give good returns in average seasons when properly fertilized and seeded . . . Oats are gross feeders and liberal fertilization usually pays well—300 to 400 lbs. of, say, a 2-12-6 or 4-12-4 at seeding time, followed by top-dressings of a quickly available nitrogenous fertilizer four to six weeks later."—*The Progressive Farmer*, February, 1942.

Price Ceiling Established on Mixed Fertilizers and Fertilizer Materials

Henderson Issues Order Setting Current Price Schedules as Maximum for 1942 Spring Season.

PRISE Administrator Leon Henderson, under date of February 21st, issued an order establishing a price ceiling for mixed fertilizer, superphosphate, and potash. After February 27th and until April 27th these commodities in quantities of 250 pounds or more can not be sold or delivered at prices higher than either (1) prices in the seller's printed price schedule or list issued prior to February 21, 1942, and effective for any portion of the period February 16-February 20, inclusive; or (2) the "average price charged for goods of the same type" between February 16 and February 20, inclusive; or (3) prices in a printed schedule last issued prior to February 21, 1942, by any manufacturer and effective for any portion of the period February 16-February 20, inclusive.

All sellers of fertilizers are required to keep two years' complete and accurate records of all sales. Each manufacturer is required to notify all his agents in writing of the order and its terms by March 5th with directions to comply therewith, and to notify the OPA in writing by March 10th that he has mailed such notice and directions. Each manufacturer is required to mail to the OPA not later than March 5th one copy of each written or printed price schedule issued between November 1, 1940, and February 21, 1942, and to file with OPA at least five business days before the effective date one copy of any and all price schedules whose issuance is thereafter contemplated.

The text of the order is as follows:

TITLE 32—NATIONAL DEFENSE
OFFICE OF PRICE ADMINISTRATION
CHAPTER XI—
PART 1367—FERTILIZERS
TEMPORARY MAXIMUM PRICE REGULATION
No. 1

Mixed Fertilizers, Superphosphate and Potash

In the judgment of the Price Administrator, it is necessary in order to effectuate the purposes of the Emergency Price Control Act of

1942, to issue a temporary regulation establishing as a maximum price or maximum prices for mixed fertilizer, superphosphate and potash, the price or prices prevailing with respect thereto within five (5) days prior to the date of issuance of such temporary regulation.

Therefore, under the authority vested in me by the Emergency Price Control Act of 1942, and in accordance with Procedural Regulation No. 1 issued by the Office of Price Administration, this Temporary Maximum Price Regulation No. 1 is hereby issued.

1367.1 *Maximum Prices for Mixed Fertilizer, Superphosphate and Potash.* (a) On and after February 27, 1942, to and including April 27, 1942, regardless of any contract, agreement, lease or other obligation, no person shall sell or deliver mixed fertilizer, superphosphate or potash, in quantities of 250 pounds or more, to a consumer at prices higher than the maximum prices established herein.

(b) (1) The maximum price shall be the price as set forth in either (i) (a) the written or printed price schedule or list last issued, prior to February 21, 1942, and effective for any portion of the period from and including February 16, 1942, to and including February 20, 1942, by the manufacturer of the mixed fertilizer, superphosphate or potash being sold, or (b) the written or printed schedule or list last issued, circulated or displayed, prior to February 16, 1942, and effective for any portion of the period from and including February 16, 1942, to and including February 20, 1942, by the person making the sale (including a dealer, agent or other person). This price shall be the price stated in such schedule or list for a sale (ii) (a) to a consumer in the same locality, (b) of the same quantity, grade and kind of mixed fertilizer, superphosphate or potash, (c) delivered in the same type of container or bag, (d) under the same terms of payment (time, cash, etc.), and (e) by the same methods and under the same conditions of delivery.

(2) Instead of the maximum price set forth in subparagraph (1) above, the maximum price may be the "average price" charged

either by the manufacturer of the mixed fertilizer, superphosphate or potash being sold, or by the person making the sale (including a dealer, agent or other person), upon "sales of the same type" for the period from and including February 16, 1942, to and including February 20, 1942, minus any customary allowances for transportation or otherwise. The "average price" shall be the price obtained by dividing the total of the prices charged during that five-day period upon "sales of the same type" (before deduction of any transportation or other allowances) by the amount of goods so sold. "Sales of the same type" means sales (i) to a consumer in the same locality, (ii) of the same quantity, grade and kind of mixed fertilizer, superphosphate or potash, (iii) delivered in the same type of container or bag, (iv) under the same terms of payment (time, cash, etc.) and, (v) by the same methods and under the same conditions of delivery.

The manufacturer or other person making the sale (including a dealer or agent) may use either the maximum price established by this Subparagraph (2) or the maximum price established by Subparagraph (1) above.

(3) If there is no applicable maximum price under either Subparagraph (1) or (2) above, then the maximum price shall be the price as set forth in the written or printed price schedule last issued, prior to February 21, 1942, and effective for any portion of the period from and including February 16, 1942, to and including February 20, 1942, by any manufacturer of mixed fertilizer, superphosphate or potash. This price shall be the price stated in such schedule or list for a sale (i) to a consumer in the same locality, (ii) of the same quantity, grade and kind of mixed fertilizer, superphosphate or potash, (iii) delivered in the same type of container or bag, (iv) under the same terms of payment (time, cash, etc.), and (v) by the same methods and under the same conditions of delivery.

(c) On and after February 27, 1942, to and including April 27, 1942, no person shall sell or contract to sell mixed fertilizer, superphosphate or potash, in quantities of 250 pounds or more, to a consumer for delivery after April 27, 1942, at prices higher than the maximum prices set forth in Paragraph (b) above, or accomplish such result by postponing until after such date the acceptance or fulfillment of any order received prior thereto. No person shall establish terms of payment or conditions of delivery in connection with the sale of mixed fertilizer, superphosphate or potash,

in quantities of 250 pounds or more, to a consumer, more onerous than those in effect or available to such consumer for the period from and including February 16, 1942, to and including February 20, 1942. No person shall offer, solicit or attempt to do any of the foregoing, or offer or attempt to sell or deliver mixed fertilizer, superphosphate or potash in quantities of 250 pounds or more, to a consumer at prices higher than the maximum prices set forth in Paragraph (b) above.

(d) The provisions of this Section shall not be applicable to sales or deliveries to consumers of mixed fertilizer, superphosphate or potash, received prior to February 27, 1942, by a carrier, other than a carrier owned or controlled by the person making the sale (including a dealer, agent or other person) for shipment to a consumer.*

1367.2 *Less than Maximum Prices.* Lower prices than those set forth in Section 1367.1 above may be charged, demanded, paid or offered.*

1367.3 *Conditional Agreements.* On and after February 27, to and including April 27, 1942, no person shall agree to sell or deliver mixed fertilizer, superphosphate or potash, in quantities of 250 pounds or more, to a consumer at a price higher than the maximum price set forth in Section 1367.1 (b) above, nor shall any person make an agreement which would provide for adjustment of the price to a price higher than such maximum price in the event that this Temporary Maximum Price Regulation No. 1 is hereafter amended or is invalidated by a Court, or provide for such adjustment upon any other condition.*

1367.4 *Evasion.* The price limitations set forth in this Temporary Maximum Price Regulation No. 1 shall not be evaded, whether by direct or indirect methods, in connection with an offer, solicitation, agreement, sale, delivery, purchase or receipt of mixed fertilizer, superphosphate or potash, alone or in conjunction with any other commodity or by way of any commission, service, transportation, or other charge, or discount, premium or other privilege, or by tying-agreement or other trade understanding; *Provided*, however, that nothing contained herein shall be construed to prohibit the granting of any customary allowances or discounts for transportation, quantity or otherwise, or the charging of prices lower than the maximum prices established by this Temporary Maximum Price Regulation No. 1.*

* Sections 1367.1 to 1367.11, inclusive, issued pursuant to Pub. No. 421, 77th Cong., 2d Sess.

THE AMERICAN FERTILIZER

ESTABLISHED 1894

PUBLISHED EVERY OTHER SATURDAY BY

WARE BROS. COMPANY

1330 VINE STREET, PHILADELPHIA, PA.

A MAGAZINE INTERNATIONAL IN SCOPE AND CIRCULATION
DEVOTED EXCLUSIVELY TO THE COMMERCIAL FERTILIZER
INDUSTRY AND ITS ALLIED INDUSTRIES

PIONEER JOURNAL OF THE FERTILIZER INDUSTRY

WARE BROS. COMPANY

PUBLISHERS

1330 VINE STREET PHILADELPHIA, PA.

A. A. WARE, EDITOR

ANNUAL SUBSCRIPTION RATES

U. S. and its possessions, also Cuba and Panama.....	\$3.00
Canada and Mexico	4.00
Other Foreign Countries	5.00
Single Copy25
Back Numbers50

THE AMERICAN FERTILIZER is not necessarily in accord with opinions expressed in contributed articles that appear in its columns. Copyright, 1941, by Ware Bros. Company.

Vol. 96 FEBRUARY 28, 1942 No. 5

Principal Articles in This Issue

	PAGE
FERTILIZER COMPANY PROFITS	5
PASTURE NOTES—No. 12	6
PRICE CEILING ESTABLISHED ON MIXED FERTILIZERS AND FERTILIZER MATERIALS	8
AAA Program Amended to Increase War Crops	10
Conferences of Agricultural and Fertilizer Industry Leaders	11
Superphosphate Production Increased	11
New Jersey Fertilizer Sales, 1941	12
FERTILIZER MATERIALS MARKET:	
New York	13
Baltimore	13
Atlanta	15
Wilmington	15
Charleston	16
Chicago	16
Tennessee Phosphate	16
U. S. Nutrition Improving	24

AAA Program Amended to Increase War Crops

Two important amendments in the Agricultural Adjustment Administration program to get increased production of "war crops" in 1942 in areas particularly adapted to such crops were announced on February 24th by the Department of Agriculture.

The amendments are intended to stimulate especially the production of oil crops, to supplement imports of oil drastically cut by war in the Far East. The amendments apply particularly to flaxseed and soybeans, grown principally in West and Midwest areas, but other war crops are included. They are peanuts (for oil), castor beans, sugar beets, dry field peas, dry beans, canning peas, canning tomatoes, fiber flax and hemp.

At least a 10 per cent increase in 1942 production over that of 1941 is called for in the case of each of the war crops.

The amendments aim at (1) expansion of war crop acreage wherever necessary to increase production for 1942, and (2) continuation of soil-building practices to increase production for 1943 and the duration of the war through increased yields per acre.

"The action," Fred S. Wallace, Chief of AAA, said, "points up the importance of soil wealth to the Food-for-Freedom program. It is another demonstration of the value to America of the storehouse of fertility 6 million farmers in the AAA have built up during the past eight years. The results of their soil building program are being used to obtain the production so vital to the success of America and the other United Nations."

The first amendment extends the list of crops and land uses which may be used to meet the requirements that 20 per cent of the farm's cropland be devoted to soil building crops. Added to the list are grasses and legumes seeded with flax, peas or small grains as a nurse crop. However, the extent to which these crops qualify depends upon the acreage of the war crops grown on the farm.

The second amendment is directed at peanut growing areas, where the soil building program requires that cooperators devote a minimum of 25 per cent of their farm's cropland to erosion resisting crops.

The amendment provides that peanuts grown for oil may qualify under the 25 per cent requirement, providing such acreage is seeded with an approved cover crop next fall following harvest. However, only half the

erosion resisting acreage requirements may be met under the amendment.

In announcing the amendment, AAA officials pointed out that farmers who underseed spring wheat acreage in 1942 in order to grow increased acreages of war crops will not thereby alter the basis upon which their wheat acreage allotments will be established in the future.

Conferences of Agricultural and Fertilizer Industry Leaders

At the request of Government officials, the National Fertilizer Association has arranged a series of six meetings for different geographical areas, for the purpose of bringing together the agricultural leaders and fertilizer manufacturers of such areas for discussion of the common problems brought to agriculture by the war emergency. Among governmental agencies that are particularly interested and will have representatives present to address the meetings are the Office of Price Administration, the Office of Agricultural Defense Relations, the U. S. Department of Agriculture, and several sections of the War Production Board.

Representatives from State agricultural experiment stations, State extension services, U. S. Department of Agriculture, Agricultural Adjustment Administration, farm organizations, cooperatives, and State War Boards are expected to attend, as well as representatives of the various defense agencies in Washington and fertilizer manufacturers.

(Continued on page 26)

Superphosphate Production Increased

Production of superphosphate in 1941 was at a new high peak for recent years. Output at plants of acidulators who report to The National Fertilizer Association exceeded 1940 by 11 per cent. It was three times as large as production in 1932, which marked the low point of the depression. Production in each of the last eleven months of 1941 was well above that in the corresponding month of 1940.

Aggregate production of plants in the South increased somewhat more than did production in the northern area.

Shipments increased even more in 1941 over 1940 than did production. All classes of shipments shared in the increase, although the reported rise in shipments of base and mixed

goods was not as great as was the rise in shipments of superphosphate.

Reflecting the higher rate of increase in shipments than in production, stocks at the year-end were moderately smaller than a year earlier. The decline was due entirely to smaller stocks of bulk superphosphate, as an increase was reported in stocks of superphosphate in base and mixed goods. Not since 1937 had total stocks at the year-end been as small as they were at the close of 1941.

Superphosphate Production, Shipments, and Stocks for December and January-December, 1941 and 1940

Expressed throughout in equivalent tons of 16% A.P.A.
Based on reports by acidulators to The National Fertilizer Association*

	United States	
	1941	1940
December		
Stocks—First of month:		
Bulk superphosphate	905,715	1,053,978
Base & mixed goods	580,958	518,020
Production:		
Bulk superphosphate	429,767	354,834
Base & mixed goods	5,978	5,056
Total Production	435,745	359,890
Other Receipts†	55,636	49,300
Book Adjustments	+ 2,801	—1,048
Total Supply	1,980,855	1,980,140
Shipments:		
Superphosphate:		
To mixers	133,054	97,883
To other acidulators	76,195	37,941
To consumers, etc.	65,343	33,550
Total Superphosphate ...	274,592	169,374
Base & mixed goods	44,120	25,321
Total Shipments	318,712	194,695
Stocks—End of month:		
Bulk superphosphate	911,013	1,106,769
Base & mixed goods	751,130	678,676
Total Stocks	1,662,143	1,785,445

Accumulated Production and Shipments for January-December

Production:		
Bulk superphosphate	4,064,706	3,664,032
Base & mixed goods	124,465	120,373
Total Production	4,189,171	3,784,405
Shipments:		
Superphosphate:		
To mixers	1,512,540	1,383,768
To other acidulators	716,425	507,975
To consumers, etc.	1,177,655	858,252
Total Superphosphate ...	3,406,620	2,749,995
Base & mixed goods	1,449,280	1,346,648
Total Shipments	4,855,900	4,096,643

* Represents approximately 85 per cent of total production.

† Includes inter-company transfers.

Base includes wet and/or dry base.

New Jersey Fertilizer Sales, 1941

The annual survey of fertilizer tonnage, grades, etc., sold in New Jersey during 1941, which was compiled by the New Jersey Agricultural Experiment Station, has been issued by Dr. Firman E. Bear, Soil Chemist. The report shows total sales of 156,142 tons, of which 135,880 tons were mixed fertilizers and 20,262 tons were individual fertilizer materials. This represents an increase of more than 15,000 tons of mixed fertilizers over the 1940 figures.

During the year 141 grades were registered of which only 5 showed sales of over 10,000 tons each, while 75 analyses produced sales of less than 100 tons each. This is an increase in the number of grades, which in 1940 totaled 134.

The recommended grades had sales totaling 53,478 tons, an increase of almost 10,000 tons over 1940. The most popular grade was the 5-10-10, with sales of 19,509 tons.

Recommended Grades

Grade	Tons	Grade	Tons
5-10-10	19,509	0-12-12	1,130
4-8-8	2,924	0-15-15	6
8-16-16	250	0-20-20	45
9-18-18	351	4-12-4	970
3-12-6	10,269	4-16-4	902
2-8-10	4,726	5-20-5	16
3-12-5	4,721	7-7-7	515
5-10-5	6,982	0-14-7	51
10-20-10	68	0-20-10	28
6-12-6	15		
		Total	53,478

Other Grades

Grade	Tons	Grade	Tons
4-8-10	19,253	5-8-5	2,391
5-8-7	12,870	4-10-8	3,433
4-12-8	10,772	10-6-4	1,841
4-9-7	4,026	5-8-8	1,688
5-8-10	3,506	6-6-5	1,429
3-8-10	2,996	2-12-6	1,588

Other Grades (Continued)

Grade	Tons	Grade	Tons
5-6-5	1,326	8-16-14	250
4-8-7	1,027	4-9-5	246
4-9-8	988	5-10-7	200
4-8-5	861	3-15-15	188
5-8-9	800	8-6-2	155
5-7-8	770	10-16-14	153
5-10-4	688	4-14-6	151
4-10-9	653	0-14-10	143
5-10-8	521	3-18-15	140
8-6-4	401	6-11-10	118
4-16-10	392	4-10-4	120
2-8-14	388	2-8-5	109
10-0-15	372	8-18-14	107
7-7-5	342	2-10-5	106
5-8-4	300	5-10-3	105
3-10-7	289	6-8-6	102
3-8-8	288	75 other grades	3,292
2-9-5	264		
3-8-15	254	Total	82,402

Total mixed
fertilizers ...135,880

Materials

Superphosphate, 16%	1,960
Superphosphate, 18%	906
Superphosphate, 20%	3,974
Superphosphate, other	918
Bone meal, raw	556
Bone meal, steamed	535
Phosphate rock	109
Basic lime phosphate	56
Muriate of potash, 50%	1,546
Muriate of potash, 60%	506
Other potash salts	90
Nitrate of soda	3,718
Calcium nitrate	313
Cal-nitro	100
Sulphate of ammonia	1,072
Ammonium phosphate	87
Ammoniated superphosphate	21
Cyanamid	1,006
Urea and uramon	167
Organic materials	2,598
Miscellaneous	24
Total material	20,262
Total fertilizer sales	156,142

BRADLEY & BAKER

FERTILIZER MATERIALS - FEEDSTUFFS

AGENTS - IMPORTERS - BROKERS

155 E. 44th Street
NEW YORK

Clinton St. & Danville Ave.
Baltimore, Md.

BRANCHES
505 Royster Building
Norfolk, Va.

1232 West Beaver Street
Jacksonville, Fla.

FERTILIZER MATERIALS MARKET

NEW YORK

Manufacturers Eager for Deliveries of Materials. Additional Orders for Mixed Goods Contingent on Additional Materials. Ceiling on Sulphate of Ammonia.

Exclusive Correspondence to "The American Fertilizer."

NEW YORK, February 24, 1942.

Fertilizer manufacturers are pressing suppliers continuously for delivery of all raw materials which they have on contract, with deliveries of sulphate of ammonia still lagging and high test superphosphate also being hard to obtain. Deliveries of potash are being fairly well sustained.

The fertilizer manufacturers in most cases would be willing to take on additional quantities, if material becomes available.

In many cases fertilizer manufacturers have stopped taking orders as they have bookings which will take care of their total production, unless additional raw materials become available.

Sulphate of Ammonia

Last week the Office of Price Administration requested a maximum re-sale price on sulphate of ammonia. This letter was sent to all manufacturers, fertilizer mixers, brokers and dealers and requested that re-sellers do not add more than \$3.50 per ton to cover any and all services actually performed and expenses actually incurred above the spot selling price of \$30.00 per ton now in effect. This covers material in bulk and at the same time, the letter from the OPA requested that a maximum of \$3.00 per ton should be charged for bags and bagging.

Nitrate of Soda

The situation in nitrate of soda is unchanged with material being allocated in certain markets, but at northern points no material has been released as yet.

MILLIMAN RESIGNS

T. E. Milliman, Chief of the Agricultural Chemicals Unit of the Office of Price Administration, has tendered his resignation because of other duties and of fatigue. He will continue for the time being as a consultant to the Section. His successor has not yet been announced.

BALTIMORE

Scarcity of Sulphate of Ammonia and Nitrate of Soda Disturbing. Better Demand for Nitrogenous Material.

Exclusive Correspondence to "The American Fertilizer."

BALTIMORE, February 24, 1942.

There have not been any outstanding features in connection with the market on fertilizer materials during the past two weeks except that the situation as far as nitrate of soda and sulphate of ammonia is concerned is daily becoming more critical.

Ammoniates.—Animal tankage is practically out of the class of fertilizer material, due to the demand and the high price obtainable for feeding purposes. The nominal market continues around \$6.60 per unit of nitrogen and 10 cents per unit of B.P.L., f.o.b. eastern points.

Nitrogenous Material.—There has been a slightly better demand for this article, in consequence of which the market is ruling somewhat firmer, being in the neighborhood of \$4.25 per unit of nitrogen, f.o.b. Baltimore.

Sulphate of Ammonia.—The OPA is placing ceiling price on re-sale material, limiting profit to \$3.50 per ton over and above initial cost, in bulk, with further allowance of additional \$3.00 per ton for bags and bagging. However, none of the fertilizer manufacturers are offering any re-sale material at the present time.

Nitrate of Soda.—There has been practically no tonnage delivered to buyers in this section during February, but it is hoped by fertilizer manufacturers in this section that OPA will allocate some tonnage for March. Stocks are at a minimum and the use of nitrate in mixed goods to take the place of sulphate of ammonia is practically out of the question. There have been no changes in quotations.

Fish Meal.—The market on the 60 per cent grade continues unchanged at \$72.50 per ton, f.o.b. Baltimore, packed in 100-lb. bags.

UNION POTASH

*The only American Company
now producing a complete line
of all grades of POTASH SALTS*

UNION POTASH & CHEMICAL COMPANY, Inc.

20 NORTH WACKER DRIVE, CHICAGO, ILL.

61 BROADWAY, NEW YORK, N. Y. · VOLUNTEER BUILDING, ATLANTA, GA.

MURIATE OF POTASH · 60% K_2O
MURIATE OF POTASH · 50% K_2O
GRANULAR
MURIATE OF POTASH · 50% K_2O
MANURE SALTS · 30% K_2O
SULPHATE OF POTASH · 90/95% K_2SO_4

SUL-PO-MAG

AMERICA'S OWN

SULPHATE OF POTASH-MAGNESIA
40% K_2SO_4 , 18.50% MgO



Superphosphate.—Deliveries continue heavy against contracts previously booked, and up to the present time there has not been any change in the market, which is still 60 cents per unit for run of pile, basis 16 per cent, and \$10.10 per ton of 2,000 lb., for flat 16 per cent grade, both in bulk, f.o.b. Baltimore.

Bone Meal.—The demand for both raw and steamed bone meal is practically nil.

Potash.—Most of the manufacturers have been taking in deliveries and holding them for the spring season. It is not anticipated that any serious shortage will develop.

Bags.—There is no change in the bag situation, although there is considerable concern that the entire supply of burlap may be cut off on account of war conditions around India.

ATLANTA

Nitrate of Soda Allotments Awaited. Increased Demand for Agricultural Land Plaster Noted.

Exclusive Correspondence to "The American Fertilizer."

ATLANTA, February 24, 1942.

March allotments for nitrate of soda are now expected sometime the latter part of this week with continued heavy demand for prompt shipment to cover grain requirements.

In view of the governments program to materially increase peanut production, there has been a tremendous demand for agricultural land plaster. In view of the probability of the domestic producers having to supply material formerly imported from Nova Scotia, prices are firm, f.o.b. production points. The general markets are as follows:

South American Blood.—\$5.25 (\$6.38 per unit N), c.i.f.

Imported Tankage.—\$5.25 (\$6.38 per unit N) and 10 cents, c.i.f. ports.

Domestic Nitrogenous.—\$3.35 (\$4.07 per unit N) western producing points.

Menhaden Scrap.—Nothing offered.

Acidulated Fish.—Nothing offered.

Sulphate of Ammonia.—Demand strong, but, in view of ceiling prices, very little turnover; practically no resale.

Nitrate of Soda.—Allocated by OPM, no change in price.

Cottonseed Meal.—8 per cent grade, \$37.00, Memphis; \$41.00, southeastern mills.

WILMINGTON

Ceiling on Sulphate of Ammonia and Mixed Goods Slows Trading. Hinders Use of Organics in Mixtures.

Exclusive Correspondence to "The American Fertilizer."

WILMINGTON, N. C., February 23, 1942.

As I start to write this trade letter, my secretary suggests that we save time by simply saying "We refer you to the OPA," and there is much to be said in favor of this.

The recent setting of a ceiling on sulphate of ammonia only succeeded in stopping the transfer of what little tonnage there was available for resale, the material being worth more to the holder than the price permitted under the ceiling set.

The temporary maximum price on mixed goods set under date of February 21st seems to meet with general approval, provided the materials which go into the make-up of most fertilizer can be bought at price levels in reason. The fixing of a price maximum on most goods does prevent the increase in the use of organics in the goods for, if the manufacturers have to increase their cottonseed meal or blood content to take the place of water-soluble ammoniates, which they can no longer obtain, they will have to raise their prices on the mixed

Manufacturers' Sales Agents for **DOMESTIC**

Sulphate of Ammonia

Ammonia Liquor

::

Anhydrous Ammonia

HYDROCARBON PRODUCTS CO., INC.

500 Fifth Avenue, New York

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.

goods. This is a phase of the matter that evidently has not been considered.

There is very little trading in materials at this time. The uncertainties of price and supply of materials is such that the trade appears to be willing to sell what materials they have in the form of mixed goods and call it a day.

CHARLESTON

Mixed Fertilizers Show Heavy Shipments. Organic Materials Scarce and in Good Demand.

Exclusive Correspondence to "The American Fertilizer."

CHARLESTON, February 24, 1942.

The manufacturers are in the middle of a very heavy movement of mixed goods and the opinion is expressed in various quarters that there may not be enough fertilizer this spring to cover the demand.

Nitrogenous.—Some stored stocks in the southeast have been cleaned up and supplies are continuing to get more and more scarce. The market is around \$3.25 per unit of ammonia (\$3.95 per unit N) f.o.b. western points; \$3.60 per unit of ammonia (\$4.37½ per unit N) ex vessel southern ports prompt only, if any left.

Blood.—This is quoted around \$5.30 per unit of ammonia (\$6.44 per unit N) f.o.b. ports for imported material, but this is very scarce. Chicago market is at \$5.50 per unit of ammonia (\$6.68½ per unit N).

Fish Meal.—This material is unobtainable.

Cottonseed Meal.—The price for the 8 per cent grade is quoted as Augusta, \$42.50; Memphis, \$37.50. The 7 per cent grade is \$39.50 at Augusta.

Superphosphate.—There are practically no offerings.

CHICAGO

Fertilizer Organics in Good Demand with Producers Well Sold Up. Feed Market Remains Firm.

Exclusive Correspondence to "The American Fertilizer."

CHICAGO, February 24, 1942.

The western ammoniate situation is unchanged from last report. Inquiry is fairly active with some trading passing, though volume is not heavy, as producers are sold up. Sellers express the belief that the market has not reached top, and are confident the demand during the next thirty days will be urgent.

Trading in the feed department has developed a rather slow pace, but a firm market still prevails.

Nominal prices are as follows: High-grade ground fertilizer tankage, \$4.00 to \$4.25 (\$4.86 to \$5.16½ per unit N) and 10 cents; standard grades crushed feeding tankage \$5.70 to \$5.75 (\$6.93 to \$6.99 per unit N) and 10 cents; blood, \$5.55 to \$5.75 (\$6.74½ to \$6.99 per unit N) dry rendered tankage, \$1.25 to \$1.30 per unit of protein, Chicago basis.

TENNESSEE PHOSPHATE

TVA Construction Work Progressing. Greater Interest in Phosphates of All Kinds Evidenced by Agriculturists.

Exclusive Correspondence to "The American Fertilizer."

COLUMBIA, TENN., February 23, 1942.

The TVA construction at the sintering plant near Godwin, the mining plant at the Akin place between Bear and Rutherford Creeks, and the pumping plant at the mouth of Bear Creek on Duck River, is progressing rapidly toward the accomplishment of their plan to produce their own raw material for the Muscle Shoals plant. This will be of great impor-



Trade Mark Registered

MAGNESIUM LIMESTONE

"It's a Dolomite"

American Limestone Company

Knoxville, Tenn.

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.



SULPHUR *Benefits All*

A fairy godmother waves a wand and—lo!—crops are better, yields higher, stocks healthier.

What with the many fertilizers, insecticides, fungicides, medicinals, soil-conditioners . . . there's hardly an activity to which SULPHUR and its compounds do not lend a helping hand.

Texas Gulf is supplying a large part of the large tonnage of SULPHUR used annually in the field of agriculture and animal husbandry.

TEXAS GULF  **SULPHUR** **C**O.
75 E. 45th Street New York City
Mines: Newgulf and Long Point, Texas

2-TG-6

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.

tance to their "great experiment" in producing treble superphosphate for the AAA program, as it is noted that the last bids opened for a supply of phosphate rock developed none that could be accepted by TVA. Their development of the cost of producing lump rock at Southport by hand during the depression (when labor in that section was glad to make \$3.00 a week) as a reasonable cost of normal production, has proven a boomerang.

The employees of Hoover & Mason Phosphate Co. voted last week to constitute the CIO union as their bargaining agency with employers and it is a matter of only a few days, when this plant will have to operate under a CIO contract. This, it is estimated, will comprise a 40 per cent advance in labor costs, naturally necessitating a corresponding raise in selling prices, which will doubtless be effective this summer when the labor advances get into real operation.

The new grinding equipment for a 50 per cent increase of capacity of the Hoover & Mason plant has been received and is rapidly being installed, but electric motors are not yet obtainable, so it will not be possible to get this new capacity in operation for the spring demand now imminent.

The nature and scope of inquiries being received in unusually large number indicate the phenomenally increased phosphate-consciousness on the part of farmers in every part of the Union. This is the first pre-spring season in the fertilizer industry for years when there has been no price cutting rumors or activities, and while there may develop a decided shortage of supply in many articles, evidence of a prosperous year for fertilizer manufacturers is widespread.

Shipments of ground phosphate rock for direct application in 1939 were the largest in each month since 1929, with considerable in-

crease in 1940 for each month, but one. Shipments in December, 1941, were 90 per cent more than in December, 1939, January, 1942, was 200 per cent greater than January, 1940, and so far February, 1942, is 100 per cent greater than February, 1940.

It is not surprising that even more Agricultural Experiment Stations are beginning to have a more tolerant attitude toward ground rock.

CANADIAN EXPORTS RESTRICTED

Grant S. Peart, Fertilizers Administrator, Ottawa, Canada, has ordered that no greater quantity of fertilizer of any kind shall be exported from Ontario, Quebec, New Brunswick, Nova Scotia, or Prince Edward Island during the period January 1, 1942, to June 30, 1942, than was exported during the same period in 1941. Use of sulphate of potash is limited to tobacco unless authorized by the Administrator, and its shipment out of Ontario or Quebec or exportation is prohibited unless authorized.

CLASSIFIED ADVERTISEMENTS

Advertisements for sale of plants, machinery, etc., and for help and employment, in this column, same type as now used, 60 cents per line, each insertion.

WANTED

ASSISTANT superintendent for large middle Atlantic water-front complete fertilizer plant. Must have at least ten years experience in manufacturing superphosphate and fertilizers, also familiar with formulating, including secondary elements. At least high school graduate and best references required. Excellent opportunity. State age, references, experience, and salary expected. Address "530," care THE AMERICAN FERTILIZER, Philadelphia.

BACK TO THE LAND

Extracted from deposits beneath the Gulf Coast
at Port Sulphur, La., and Freeport, Tex., sulphur
—better than 99½% pure—goes back to the
land in fertilizer to help solve soil problems.

FREEPORT SULPHUR COMPANY

122 East 42nd Street, New York City

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.



RUST RUINS MACHINERY

...Rust ruins COTTON, too!

THE two types of rust are, of course, entirely different... but they both produce ruinous results!

Today, especially, there should be neither metal rust nor cotton rust. Sufficient Potash in your fertilizer mix will help grow strong, healthy cotton... free from rust. This type of rust is merely the result of a deficiency of potash in the soil.

Sunshine State Potash can be depended upon... today as in normal times... because of its consistently uniform analysis and easy blending quality. What's more... there is an adequate supply available for the domestic market.

HIGRADE MURIATE OF POTASH
62/63% K_2O
Also 50% K_2O Grade
MANURE SALTS
22% K_2O Minimum
Trademark Reg. U. S. Pat. Off.



UNITED STATES POTASH COMPANY
INCORPORATED

30 ROCKEFELLER PLAZA, NEW YORK, N. Y.

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.

**PRICE CEILING ESTABLISHED ON MIXED
FERTILIZERS AND FERTILIZER
MATERIALS**

(Continued on page 9)

1367.5 Records and Reports. (a) Every person (including an agent) making a sale of mixed fertilizer, superphosphate or potash, in quantities of 250 pounds or more, to a consumer during the period from and including February 16, 1942, to and including April 27, 1942, shall keep for inspection by the Office of Price Administration for a period of not less than two years, complete and accurate records of each such sale, showing the date thereof, the name and address of the buyer, of the person (including an agent) making the sale, and of the manufacturer of the mixed fertilizer, superphosphate or potash; the quantity, grade and kind of mixed fertilizer, superphosphate or potash sold; the bags or containers in which delivered; the price charged or received therefor; the terms of payment (time, cash, etc.); and the method and conditions of delivery.

(b) Not later than March 5, 1942, every manufacturer of mixed fertilizer, superphosphate or potash, who is engaged in the business of selling the same to consumers, whether by or through any agent or other person, shall file with the Office of Price Administration in Washington, D. C., one copy of each and every written or printed price schedule, whether temporary or permanent, issued by him in connection with the sale thereof to consumers from and after November 1, 1940, until February 27, 1942, together with all written or printed amendments and supplements to any of such schedules; and from and after February 27, 1942, each such person shall continue, until further notice, to file with the Office of Price Administration in Washington, D. C., one copy of any and all such price schedules, and supplements and amendments thereto, whose issuance is thereafter contemplated, at least five (5) business days prior to the contemplated effective date thereof. Neither such filing, nor the failure to object to the contents thereof, shall constitute authorization therefor, or approval thereof, by the Office of Price Administration.

(c) Not later than March 5, 1942, every manufacturer of mixed fertilizer, superphosphate or potash, who is engaged in the business of selling the same to consumers, shall mail or cause to be mailed to his agents written notice of the issuance and terms of this Temporary Maximum Price Regulation No. 1 and a direction to comply therewith. Such manufacturer shall also, not later than March 10, 1942, notify the Office of Price Administration in writing that he has mailed or caused to be mailed such written notice and direction.

Persons affected by this Temporary Maximum Price Regulation No. 1 shall submit such reports to the Office of Price Administration as it may, from time to time, require.*

1367.6 Enforcement. (a) Persons violating any provision of this Temporary Maximum Price Regulation No. 1 will be subject to the civil and criminal penalties provided for by the Emergency Price Control Act of 1942.

(b) Persons who have evidence of any violation of this Temporary Maximum Price Regulation No. 1 or of any regulation or order issued by the Office of Price Administration or of any acts or practices which constitute or will constitute such a violation are urged to communicate with the nearest Field or Regional Office or the principal office of the Office of Price Administration in Washington, D. C.*

1367.7 Export Sales. The maximum prices established by this Temporary Maximum Price Regulation No. 1 shall not apply to sales of mixed fertilizer, superphosphate or potash for delivery to persons in a foreign country or in a territory or possession of the United States.*

1367.8 Import Sales. The maximum prices established by this Temporary Maximum Price Regulation No. 1 shall not apply to sales of mixed fertilizer, superphosphate or potash, in a foreign country for delivery to the United States or to a territory or possession of the United States, or to the resale thereof, after such importation, to persons in the United States, or a territory or possession of the United States.*

1367.9 Petitions for Amendment. Persons seeking modification of any provision of this

	FERTILIZER PLANT EQUIPMENT			
	Dependable for Fifty Years	All-Steel Self-Contained Fertilizer Mixing Units	Batch Mixers— Dry Batching Pan Mixers— Wet Mixing	Swing Hammer and Cage Type Tailings Pulverizers
				Vibrating Screens Dust Weigh Hoppers Acid Weigh Scales

STEDMAN'S FOUNDRY & MACHINE WORKS 505 Indiana Ave. AURORA, INDIANA, U.S.A.

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.

A Complete Service

THE strategic factory locations of the American Agricultural Chemical Company, as shown on the accompanying map, assure prompt, dependable service for the complete line of products listed below.

We manufacture all grades of Commercial Fertilizers, Superphosphate, Agrinite Tankage, Bone Black, Bone Black Pigments (Cosmic Black), Dicalcium Phosphate, Monocalcium Phosphate, Gelatin, Glue, Ground Limestone, Crushed Stone, Agricultural Insecticides (including Pyrox, Arsenate of Lead, Calcium Arsenate, etc.), Trisodium and Disodium Phosphate, Phosphorus, Phosphoric Acid, Sulphuric Acid, Salt Cake; and we are importers and/or dealers in Nitrate of Soda, Cyanamid, Potash Salts, Sulphate of Ammonia, Raw Bone Meal, Steamed Bone Meal, Sheep and Goat Manure, Fish, Blood and Tin-Tetrachloride. We mine and sell all grades of Florida Pebble Phosphate Rock.



FACTORIES

Alexandria, Va.	Detroit, Mich.	Pensacola, Fla.
Baltimore, Md.	East Point, Ga.	Pierce, Fla.
Buffalo, N. Y.	East St. Louis, Ill.	Port Hope, Ont., Can.
Carteret, N. J.	Greensboro, N. C.	Presque Isle, Me.
Cayce, S. C.	Havana, Cuba	Savannah, Ga.
Chambly Canton, Quebec, Can.	Henderson, N. C.	Searsport, Maine
Charleston, S. C.	Montgomery, Ala.	South Amboy, N. J.
Cincinnati, Ohio	Norfolk, Va.	Spartanburg, S. C.
Cleveland, Ohio	No. Weymouth, Mass.	West Haven, Conn.
		Wilmington, N. C.

The AMERICAN AGRICULTURAL CHEMICAL Co.

50 Church Street, New York City

SALES OFFICES



Alexandria, Va.	Columbia, S. C.	Laurel, Miss.	Pierce, Fla.
Baltimore, Md.	Detroit, Mich.	Montgomery, Ala.	Port Hope, Ont., Can.
Buffalo, N. Y.	East St. Louis, Ill.	Montreal, Quebec, Can.	St. Paul, Minnesota
Carteret, N. J.	Greensboro, N. C.	New York, N. Y.	Savannah, Ga.
Charleston, S. C.	Havana, Cuba	Norfolk, Va.	Spartanburg, S. C.
Cincinnati, Ohio	Henderson, N. C.	No. Weymouth, Mass.	Wilmington, N. C.
Cleveland, Ohio	Houlton, Me.	Pensacola, Fla.	

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.

Maximum Price Regulation No. 1 or an adjustment or exception not provided for therein may file petitions for amendment in accordance with the provisions of Procedural Regulation No. 1, issued by the Office of Price Administration.*

1367.10 Definitions. (a) When used in this Temporary Maximum Price Regulation No. 1, the term

(1) "person" includes an individual, corporation, partnership, association, farmers' or consumers' cooperative or other organized group of persons, or legal successor or representative of any of the foregoing, and includes the United States or any agency thereof, or any other government, or any of its political subdivisions, or any agency of any of the foregoing.

(2) "manufacturer" means a person who produces, mixes, or processes, or who markets for his own account and under his own brand or trade name, mixed fertilizers, superphosphate, potash, or nitrogenous material for use as an aid to the growth of crops or plants.

(3) "consumer" means a person purchasing mixed fertilizer, superphosphate or potash for use in aiding the growth of crops or plants (and not for resale).

(4) "mixed fertilizer" means any substance containing any two, or more, of potash, superphosphate, and nitrogenous material, when marketed or sold as an aid to the growth of crops or plants.

(5) "superphosphate" means any product which is obtained by mixing rock phosphate with either sulphuric acid or phosphoric acid or with both acids, when marketed or sold as an aid to the growth of crops or plants.

(6) "potash" means muriate, chloride, or sulphate of potash, manure salts and any other substance containing potassium oxide (K_2O), when marketed or sold as an aid to the growth of crops or plants.

(7) "nitrogenous material" means any organic or inorganic substance containing nitrogen, when marketed or sold as an aid to the growth of crops or plants, except when so marketed or sold without the admixture of any potash or superphosphate.

(8) "grade" means the minimum guarantee of the plant food content of mixed fertilizer, superphosphate, or potash, expressed in terms of nitrogen, available phosphoric acid, and water soluble potash, e.g. 4-8-4, 3-8-5, etc.

(9) "kind" as distinguished from the term "grade" refers only to mixed fertilizer and means the substances, and the proportions

thereof, containing the guaranteed plant food content of mixed fertilizer—as, for example, in the case of nitrogenous material, 80% inorganic and 20% insoluble organic nitrogen; or in the case of potash, 75% sulphate of potash and 25% muriate of potash.

(b) Unless the context otherwise requires, the definitions set forth in Section 302 of the Emergency Price Control Act of 1942 shall apply to other terms used herein.*

1367.11 Effective Period. This Temporary Maximum Price Regulation No. 1 (Sections 1367.1 to 1367.11 inclusive) shall become effective on February 27, 1942, and shall, unless earlier revoked or replaced, expire on April 27, 1942.

Issued this 21st day of February 1942.

LEON HENDERSON,
Price Administrator.

NORTH CAROLINA URGED TO HELP FERTILIZER PROGRAM

Paper bags will be used by the fertilizer industry this year "because of the shortage of burlap" and use of higher analysis grades is being urged "in the interest of national defense and economy," D. S. Coltrane, assistant to the North Carolina Commissioner of Agriculture, said recently.

North Carolina farmers use one-seventh of the Nation's output of fertilizer.

"While the fertilizer situation is not critical at this time, farmers may well acquaint themselves with war conditions that will necessarily effect many changes in grades, manufacture and shipment of plant food," Coltrane said, emphasizing that:

1. Paper bags and second-hand burlap bags must be used wherever possible as a result of the government burlap rationing program.

2. An increase in freight rates has been pro-

(Continued on page 26)

**May We Serve You
on Your
CONDITIONER?**

THE DICKERSON COMPANY
Incorporated
Drexel Building, Philadelphia, Pa.
— Brokers —
FERTILIZER MATERIALS



ACID PLANTS

**COMPLETE FERTILIZER PLANTS
ACID CONCENTRATORS
AMMONIA OXIDATION UNITS**

CHEMICO Service includes complete processes, equipment and structures, training of working crew, and initial operating supervision.

CHEMICO performance guarantees are based on 27 years of specialized experience in acid production and recovery, and the results obtained in world-wide installations.

Your Inquiry is Invited

Chemical Construction Corporation
30 Rockefeller Plaza, New York, N. Y.

**CHEMICO PLANTS are
PROFITABLE INVESTMENTS**

Keyed SERVICE!

Fertilizer plants all over the country—large and small—state their needs and we meet them. Large stocks of seasoned materials and ample modern production facilities enable us to make prompt shipments.

TRIPLE SUPERPHOSPHATE

46 to 48% Available Phosphoric Acid

We also manufacture
HIGH-GRADE SUPERPHOSPHATE

U. S. Phosphoric Products

Division
TENNESSEE CORPORATION

Tampa, Florida

New York Office:
61 Broadway
Washington, D. C.
716 Investment Bldg.

Sales Agents:
Bradley & Baker
155 East 44th St.
New York, N. Y.

A Mark of



Reliability

SPECIFY THREE ELEPHANT



... WHEN BORON IS NEEDED TO CORRECT A DEFICIENCY OF THIS IMPORTANT SECONDARY ELEMENT

Agricultural authorities have shown that a lack of Boron in the soil can result in deficiency diseases which seriously impair the yield and quality of crops.

When Boron deficiencies are found, follow the recommendations of local County Agents or State Experiment Stations.

Information and references available on request.

AMERICAN POTASH & CHEMICAL CORPORATION

70 PINE STREET, NEW YORK CITY

Pioneer Producers of Muriate of Potash in America

See Page 4

U. S. Nutrition Improving

Americans have not yet reached the optimum diet indicated in the ideal called the "nutrition yardstick," but they have been on their way for years. The U. S. Department of Agriculture reports a new high for commercial vegetable production in 1941, and urges a 10 per cent further increase in commercial truck crops as a goal for 1942—1,840,000 acres instead of the 1,680,000 acres last year. "Producers can expect increased demand," the Department comments, and says a slight increase in market gardening will also benefit from this demand.

Not including potatoes and sweet potatoes, the 11½ million tons of vegetables marketed canned or processed during 1941 totalled 7 per cent larger than in any previous year. The total acreage was only slightly larger than the acreage for the former peak year, 1937, but yields were considerably better. The 1942 goals for canned vegetables include a 27 per cent increase in canned tomatoes, a 32 per cent increase in canned peas, and a total of other canned vegetables equaling the high mark set in 1941.

The significance of the current production figures from the nutritional standpoint is evident in comparisons of the 1941 vegetable crops with those of 15 or 20 years ago. In those days, says the Department, vitamin and mineral requirements were less well known. To many, lettuce was a tea-room fad and spinach a food inflicted on the very young.

Better understanding of the need of vitamin A as furnished by leafy green vegetables and carrots is illustrated by the figures for lettuce, spinach, and carrots. In 1921—7,214,000 crates of lettuce were shipped to market; in 1927, 18,634,000; in 1941, American salad bowls provided a market for 23,388,000 crates of lettuce—about 3 times as much as the 1921 salad eaters consumed, although the population increase from 1920 to 1940 was only 25 per cent—from 105,710,620 in 1920 to 131,669,275 in 1940.

Twenty years ago, the spinach figure was 76,900 tons; for 1941, 143,277 tons. In 1921 carrots were not important enough for record;

in 1927, about 6¼ million bushels were shipped; in 1941 this figure nearly tripled to 17,747,000 bushels.

Vegetables that supply vitamin C include cabbage, tomatoes, snap beans, green peas, cauliflower, onions, and various others, as well as the leafy green vegetables and many that also contain vitamin A. The comparisons on some of these reflect similar improvements in nutrition.

Commercial vegetable crops included 81,050 tons of snap beans in 1921, both fresh and canned, 152,250 tons in 1927, and 348,705 tons in 1941—more than 4 times as much as in 1921. About one-third of this production was canned.

The story on green peas is similar. In 1921, 128,500 tons of green peas were reported; 236,200 in 1927; 466,835 tons in 1941, or nearly 3¾ times the production 20 years earlier. Three-fourths of last year's peas went into cans.

Tomato production increased 4½ times in the same period, jumping from 726,900 tons in 1921 to 3,374,600 tons in 1941. Nearly five-sixths of the tomato tonnage—2,730,200 tons—was canned as a vegetable or converted into canned juice.

The cabbage figures show the least upward trend, possibly because improved winter transportation for southern-raised vegetables provides greater variety in northern markets. But 1941 cabbage production was nearly double the 1921 quantity—1,273,300 tons as compared with 689,500 tons. Some of the cabbage is processed as kraut.

Similar comparisons apply to vegetables that supply vitamin B₁. Many of the same vegetables mentioned as sources of vitamin A and C are also good sources of vitamin B₁, riboflavin, nicotinic acid, and various minerals needed in a well-rounded diet, and a few are more valuable for vitamin B₁ than for other vitamins, says the Department.

The 1921 list named only 14 vegetables either processed or shipped fresh in large quantities to all parts of the country. The 1941 reports include asparagus, beets, snap beans, cabbage, carrots, cauliflower, sweet corn, eggplant, celery, cucumbers, garlic, kale, lettuce,

L.W. HUBER COMPANY
Brokers Fertilizer Materials ROOM 903
 170 Broadway
 New York, N.Y.

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.

ALEX. M. McIVER & SON

Official Brokers for
MILORGANITE

Specializing
CHILEAN NITRATE OF SODA
Nitrogenous Materials
Blood and Fertilizer Tankage
Bone Meals
Manganese Sulphate
SOUTH AMERICAN DRY
RENDERED TANKAGE

•
PEOPLES OFFICE BUILDING
Charleston, S. C.



Specializing in
Sulphate of Ammonia
Low Grade Ammoniates
Superphosphate
Sulphuric Acid
Bags

*Inquiries and offerings
invited*

KEYSER BUILDING

Stop Figuring!

There's an easier way to find the desired per cent.
of constituent in complete goods—you can get it
at a glance by consulting

ADAMS' FORMULA RULE

Hundreds in use, and claimed indispensable by
every owner.

The Adams' Formula Rule, pocket size, may be car-
ried for years. When soiled it is readily cleaned with
a damp cloth. **Price, \$1.00.** Kindly remit with order.

(Special quotations on quantities of 12 or more)

WARE BROS. COMPANY

1330 Vine Street

PHILADELPHIA

limas, onions, green peas, green peppers, pimientoes, shallots, spinach and tomatoes, either for shipment fresh or for canning.

The statistics do not include a number of other vegetables produced in smaller lots, nor the home-raised vegetables consumed at home or locally. The complete production record reflects a striking change for the better in national food habits as a result of the wider spread of nutrition information, say the Department.

CONFERENCES OF AGRICULTURAL AND FERTILIZER INDUSTRY LEADERS

(Continued from page 11)

The dates and places of the meetings and the general area which each covers are:

March 4th, Amherst, Mass., Jones Library Hall; headquarters, Hotel Lord Jeffrey, includes New England States. (Held jointly with Southern New England Fertilizer Conference which begins at 1.00 P. M., March 3rd.)

March 6th, Rocky Mount, N. C., Ricks Hotel, includes Virginia, North Carolina, South Carolina.

March 9th, New Orleans, La., Hotel Roosevelt, includes Mississippi, Louisiana, Texas, Arkansas.

March 10th, Atlanta, Ga., Piedmont Hotel, includes Georgia, Florida, Alabama, Tennessee.

March 13th, Philadelphia, Pa., Bellevue-Stratford, includes New York, New Jersey, Pennsylvania, Delaware, Maryland, West Virginia.

March 20th, Chicago, Ill., Palmer House, includes Wisconsin, Illinois, Indiana, Ohio, Kentucky, Missouri, Michigan, Iowa, Minnesota, and other Midwestern States.

All meetings will begin at 10.00 A. M.

Producers' representatives will be welcome to attend any or all of these meetings. It is hoped that the smaller companies will attend generously the meeting nearest to their location, and that the large and medium-sized companies will arrange to have representation at each of the meetings that comes within reach of their branch operations.

The topics that will be discussed at the meetings will be essentially the same, but there will be some changes in the speakers. Among the topics scheduled for discussion by representatives of Government agencies are: bags; transportation; crop goals; agricultural defense cooperation; priorities; grade reduction.

A discussion of the fertilizer situation with special reference to nitrogen and the allocation of nitrate of soda will be included in the programs.

NORTH CAROLINA URGED TO HELP FERTILIZER PROGRAM

(Continued from page 22)

posed, therefore fertilizer orders should be placed as soon as possible.

3. Tire shortages and transportation "tie-ups" resulting from the increased defense programs may delay shipments.

4. Nitrate of soda, an essential plant food, is being allocated by the government on a monthly basis and adequate deliveries are questionable.

5. Empty burlap bags are valuable and should be saved by farmers for possible "refills" in the future.

6. Costs for low analysis fertilizers are higher per unit than the higher analysis grades, thus by buying recommended grades growers will save unnecessary expenditures for bagging, labor and freight.

"Hardships are ahead for the fertilizer manufacturer, but they are cheerfully cooperating in the defense program and are making every effort to furnish growers the plant food necessary 'to win the war,'" Coltrane said. "They are patriotic in their appeal to farmers to use high analysis grades of fertilizer, to effect economy in bags, transportation and labor."

TOP-DRESSING OATS

One way of increasing oat production to meet defense needs is by top-dressing with nitrogenous fertilizers, says the Arkansas Extension Review, reporting last year's results. An acre plot with no fertilizer made 39.5 bushels of oats; a plot treated with 100 lbs. of nitrogen fertilizer yielded 53 bushels; while one treated with 200 lbs. nitrogen fertilizer yielded 63.5 bushels per acre. The fertilizer was applied the first of March and the heavier application made the greater profit.

**SACKETT
EQUIPMENT**

for the Fertilizer Plant

**BATCH MIXERS • PULVERIZERS
SCREENS • BUCKET ELEVATORS
CONTINUOUS AMMONIATING EQUIPMENT
BASING, MIXING & BAGGING UNITS
COMPLETE FERTILIZER PLANTS**

THE A. J. SACKETT & SONS CO.
1701 S. HIGHLAND AVE., BALTIMORE, MD.

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.



A WAR MESSAGE to ALL EMPLOYERS

★ From the United States Treasury Department ★

WINNING THIS War is going to take the mightiest effort America has ever made—in men, materials, and money!

An important part of the billions of dollars required to produce the planes, tanks, ships, and guns our Army and Navy need must come from the sale of Defense Bonds. Only by regular pay-day by pay-day investment of the American people can this be done.

Facing these facts, your Government needs, urgently, your cooperation with your employees in *immediately* enrolling them in

A PAY-ROLL SAVINGS PLAN

The voluntary Pay-Roll Savings Plan (approved by organized labor) provides for regular purchases by your employees of Defense Bonds through voluntary pay-roll allotments. All you do is hold the total funds authorized from pay-roll allotments in a separate account and deliver a Defense Bond to the employee

each time his allotments accumulate to an amount sufficient to purchase a Bond.

You are under no obligation, other than your own interest in the future of your country, to install the Plan after you and your employees have given it consideration.

WHAT THE PAY-ROLL SAVINGS PLAN DOES

1. It provides immediate cash now to produce the finest, deadliest fighting equipment an Army and Navy ever needed to win. 2. It gives every American wage earner the opportunity for financial participation in National Defense. 3. By storing up wages, it will reduce the current demand for consumer goods while they are scarce, thus retarding inflation. 4. It reduces the percentage of Defense financing that must be placed with banks, thus putting our emergency financing on a sounder basis. 5. It builds a reserve buying power for the post-war purchase of civilian goods to keep our factories running after the war. 6. It helps your employees provide for their future.

To get full facts on installing the
Pay-Roll Savings Plan, write TODAY to:
Treasury Department, Section B,
709 12th Street, NW.,
Washington, D. C.

U. S. Defense BONDS ★ STAMPS

This space contributed to National Defense by

THE AMERICAN FERTILIZER



BUYERS' GUIDE

A CLASSIFIED INDEX TO ALL THE ADVERTISERS IN "THE AMERICAN FERTILIZER"



This list contains representative concerns in the Commercial Fertilizer Industry, including fertilizer manufacturers, machinery and equipment manufacturers, dealers in and manufacturers of commercial fertilizer materials and supplies, brokers, chemists, etc.
For Alphabetical List of Advertisers, see page 33.



ACID BRICK

Charlotte Chem. Laboratories, Inc., Charlotte, N. C.
Chemical Construction Corp., New York City.

ACID EGGS

Chemical Construction Corp., New York City.

ACIDULATING UNITS

Chemical Construction Corp., New York City.
Sackett & Sons Co., The A. J., Baltimore, Md.

AMMO-PHOS

American Cyanamid Co., New York City.

AMMONIA—Anhydrous

Barrett Division, Allied Chemical & Dye Corp., New York City
DuPont de Nemours & Co., E. I., Wilmington, Del.
Hydrocarbon Products Co., New York City.

AMMONIA LIQUOR

Barrett Division, Allied Chemical & Dye Corp., New York City
DuPont de Nemours & Co., E. I., Wilmington, Del.
Hydrocarbon Products Co., New York City.

AMMONIA OXIDATION UNITS

Chemical Construction Corp., New York City.

AMMONIATING EQUIPMENT

Sackett & Sons Co., The A. J., Baltimore, Md.

AMMONIUM NITRATE SOLUTIONS

Barrett Division, Allied Chemical & Dye Corp., New York City

AUTOMATIC ELEVATOR TAKEUPS

Sackett & Sons Co., The A. J., Baltimore, Md.

BABBITT

Sackett & Sons Co., The A. J., Baltimore, Md.

BAGS AND BAGGING—Manufacturers

Bagpak, Inc., New York City.
Bemis Bro. Bag Co., St. Louis, Mo.

BAGS—Cotton

Bemis Bro. Bag Co., St. Louis, Mo.

BAGS—Paper

Bagpak, Inc., New York City.
Bemis Bro. Bag Co., St. Louis, Mo.

BAGS (Waterproof)—Manufacturers

Bemis Bro. Bag Co., St. Louis, Mo.

BAGS—Dealers and Brokers

Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Huber & Company, New York City.
Jett, Joseph C., Norfolk, Va.
McIver & Son, Alex. M., Charleston, S. C.
Taylor, Henry L., Wilmington, N. C.
Wellmann, William E., Baltimore, Md.

BAGGING MACHINES—For Filling Sacks

Atlanta Utility Works, East Point, Ga.
Bagpak, Inc., New York City.
Sackett & Sons Co., The A. J., Baltimore, Md.

BAG PILERS

Link-Belt Company, Philadelphia, Chicago.

BEARINGS

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.

BELT LACING

Sackett & Sons Co., The A. J., Baltimore, Md.

BELTING—Chain

Atlanta Utility Works, East Point, Ga.
Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

BELTING—Leather, Rubber, Canvas

Sackett & Sons Co., The A. J., Baltimore, Md.

BOILERS—Steam

Atlanta Utility Works, East Point, Ga.

BONE BLACK

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Huber & Company, New York City.

BONE PRODUCTS

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
Huber & Company, New York City.
Jett, Joseph C., Norfolk, Va.
McIver & Son, Alex. M., Charleston, S. C.
Schmaltz, Jos. H., Chicago, Ill.
Wellmann, William E., Baltimore, Md.

BORAX AND BORIC ACID

American Potash and Chem. Corp., New York City.
Pacific Coast Borax Co., New York City.

BROKERS

Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
Dickerson Co., The, Philadelphia, Pa.
Huber & Company, New York City.
Jett, Joseph C., Norfolk, Va.
Keim, Samuel L., Philadelphia, Pa.
McIver & Son, Alex. M., Charleston, S. C.
Schmaltz, Jos. H., Chicago, Ill.
Taylor, Henry L., Wilmington, N. C.
Wellmann, William E., Baltimore, Md.

BUCKETS—Elevator

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

HENRY L. TAYLOR, Broker

Bentley's Code Cable Address "HLTAYLOR"
NORTH CAROLINA BANK BLDG., WILMINGTON, N. C.

Menhaden Fish Products
and
Fertilizer Materials

A Classified Index to Advertisers in
"The American Fertilizer"

BUYERS' GUIDE

For an Alphabetical List of all the
Advertisers, see page 33

BUCKETS—For Hoists, Cranes, etc., Clam Shell, Orange Peel, Drag line, Special; Electrically Operated and Multi Power

Hayward Company, The, New York City.
Link-Belt Company, Philadelphia, Chicago.

BURNERS—Sulphur

Chemical Construction Corp., New York City.

BURNERS—Oil

Monarch Mfg. Works, Inc., Philadelphia, Pa.
Sackett & Sons Co., The A. J., Baltimore, Md.

CABLEWAYS

Hayward Company, The, New York City.

CARBONATE OF AMMONIA

American Agricultural Chemical Co., New York City.
DuPont de Nemours & Co., E. I., Wilmington, Del.

CARS—For Moving Materials

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

CARTS—Fertilizer, Standard and Roller Bearing

Atlanta Utility Works, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.

CASTINGS—Acid Resisting

Charlotte Chem. Laboratories, Inc., Charlotte, N. C.
Durlon Co., Inc., The, Dayton, Ohio.

CASTINGS—Iron and Steel

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

CEMENT—Acid-Proof

Charlotte Chem. Laboratories, Inc., Charlotte, N. C.
Chemical Construction Corp., New York City.

CHAIN DRIVES—Silent

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

CHAINS AND SPROCKETS

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

CHAMBERS—Acid

Chemical Construction Corp., New York City.
Fairlie, Andrew M., Atlanta, Ga.

CHEMICAL APPARATUS

Charlotte Chem. Laboratories, Inc., Charlotte, N. C.
Durlon Co., Inc., The, Dayton, Ohio.
Monarch Mfg. Works, Inc., Philadelphia, Pa.

CHEMICALS

American Agricultural Chemical Co., New York City.
American Cyanamid Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Barrett Division, Allied Chemical & Dye Corp., New York City
Bradley & Baker, New York City.
DuPont de Nemours & Co., E. I., Wilmington, Del.
Huber & Company, New York City.

CHEMICALS—Continued

International Minerals & Chemical Corporation,
Chicago, Ill.

McIver & Son, Alex. M., Charleston, S. C.
Phosphate Mining Co., The, New York City.
Wellmann, William E., Baltimore, Md.

CHEMICAL PLANT CONSTRUCTION

Atlanta Utility Works, East Point, Ga.
Charlotte Chem. Laboratories, Inc., Charlotte, N. C.
Chemical Construction Corp., New York City.
Fairlie, Andrew M., Atlanta, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

CHEMISTS AND ASSAYERS

Gascoyne & Co., Baltimore, Md.
Shuey & Company, Inc., Savannah, Ga.
Stillwell & Gladding, New York City.
Wiley & Company, Baltimore, Md.

CLUTCHES

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

CONCENTRATORS—Sulphuric Acid

Chemical Construction Corp., New York City.
Fairlie, Andrew M., Atlanta, Ga.

CONDITIONERS AND FILERS

American Limestone Co., Knoxville, Tenn.
Dickerson Co., The, Philadelphia, Pa.
Phosphate Mining Co., The, New York City.

CONTACT ACID PLANTS

Chemical Construction Corp., New York City.

COPPER SULPHATE

Tennessee Corporation, Atlanta, Ga.

COTTONSEED PRODUCTS

Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
Huber & Company, New York City.
Jett, Joseph C., Norfolk, Va.
McIver & Son, Alex. M., Charleston, S. C.
Schmalts, Jos. H., Chicago, Ill.
Taylor, Henry L., Wilmington, N. C.
Wellmann, William E., Baltimore, Md.

CRANES AND DERRICKS

Hayward Company, The, New York City.
Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.

CYANAMID

American Agricultural Chemical Co., New York City.
American Cyanamid Co., New York City.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
Jett, Joseph C., Norfolk, Va.
Taylor, Henry L., Wilmington, N. C.
Wellmann, William E., Baltimore, Md.

DENS—Superphosphate

Chemical Construction Corp., New York City.
Stedman's Foundry and Mach. Works, Aurora, Ind.

Andrew M. Fairlie

CHEMICAL ENGINEER

22 Marietta Street
Building

ATLANTA, GA.

CABLE ADDRESS: "SULFACID ATLANTA"

SULPHURIC Acid Plants . . . Design, Construction,
Equipment . . . Operation . . . Mills-Packard Water-
Cooled Acid Chambers, Gaillard Acid-Cooled Chambers,
Gaillard Acid Dispersers, Contact Process Sulphuric
Acid Plants.

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.

A Classified Index to Advertisers in
"The American Fertilizer"

BUYERS' GUIDE

For an Alphabetical List of all the
Advertisers, see page 33

DISINTEGRATORS

Atlanta Utility Works, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

DRYERS—Direct Heat

Sackett & Sons Co., The A. J., Baltimore, Md.

DRIVES—Electric

Link-Belt Company, Philadelphia, Chicago.

DUMP CARS

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

DUST COLLECTING SYSTEMS

Sackett & Sons Co., The A. J., Baltimore, Md.

ELECTRIC MOTORS AND APPLIANCES

Atlanta Utility Works, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.

ELEVATORS

Atlanta Utility Works, East Point, Ga.
Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

ELEVATORS AND CONVEYORS—Portable

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.

ENGINEERS—Chemical and Industrial

Chemical Construction Corp., New York City.
Fairlie, Andrew M., Atlanta, Ga.
Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

ENGINES—Steam

Atlanta Utility Works, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.

EXCAVATORS AND DREDGES—Drag Line and Cableway

Hayward Company, The, New York City.
Link-Belt Company, Philadelphia, Chicago.
Link Belt Speeder Corp., Chicago, Ill., and Cedar Rapids, Iowa.

FERTILIZER MANUFACTURERS

American Agricultural Chemical Co., New York City.
American Cyanamid Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Farmers Fertilizer Co., Columbus, Ohio
International Minerals & Chemical Corporation, Chicago, Ill.
Phosphate Mining Co., The, New York City.
U. S. Phosphoric Products Division, Tennessee Corp., Tampa, Fla.

FISH SCRAP AND OIL

Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
Huber & Company, New York City.
Jett, Joseph C., Norfolk, Va.
McIver & Son, Alex. M., Charleston, S. C.
Taylor, Henry L., Wilmington, N. C.
Wellmann, William E., Baltimore, Md.

FOUNDERS AND MACHINISTS

Atlanta Utility Works, East Point, Ga.
Charlotte Chem. Laboratories, Inc., Charlotte, N. C.
Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

GARBAGE TANKAGE

Wellmann, William E., Baltimore, Md.

GEARS—Machine Moulded and Cut

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

GEARS—Silent

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.

GELATINE AND GLUE

American Agricultural Chemical Co., New York City.

GUANO

Baker & Bro., H. J., New York City.

HOISTS—Electric, Floor and Cage Operated, Portable

Hayward Company, The, New York City.

HOPPERS

Atlanta Utility Works, East Point, Ga.
Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

IMPORTERS, EXPORTERS

Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
Wellmann, William E., Baltimore, Md.

IRON SULPHATE

Tennessee Corporation, Atlanta, Ga.

INSECTICIDES

American Agricultural Chemical Co., New York City.

LACING—Belt

Sackett & Sons Co., The A. J., Baltimore, Md.

LIMESTONE

American Agricultural Chemical Co., New York City.
American Limestone Co., Knoxville, Tenn.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
McIver & Son, Alex. M., Charleston, S. C.
Wellmann, William E., Baltimore, Md.

LOADERS—Car and Wagon, for Fertilizers

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.

MACHINERY—Acid Making

Atlanta Utility Works, East Point, Ga.
Charlotte Chem. Laboratories, Inc., Charlotte, N. C.
Chemical Construction Corp., New York City.
Duriron Co., Inc., The, Dayton, Ohio.
Fairlie, Andrew M., Atlanta, Ga.
Monarch Mfg. Works, Inc., Philadelphia, Pa.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

MACHINERY—Coal and Ash Handling

Hayward Company, The, New York City.
Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.

MACHINERY—Elevating and Conveying

Atlanta Utility Works, East Point, Ga.
Hayward Company, The, New York City.
Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

MACHINERY—Grinding and Pulverizing

Atlanta Utility Works, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

A Classified Index to Advertisers in
"The American Fertilizer"

BUYERS' GUIDE

For an Alphabetical List of all the
Advertisers, see page 33

MACHINERY—Power Transmission

Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

MACHINERY—Pumping

Atlanta Utility Works, East Point, Ga.
Durlon Co., Inc., The, Dayton, Ohio.

MACHINERY—Tankage and Fish Scrap

Atlanta Utility Works, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

MAGNETS

Atlanta Utility Works, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

MANGANESE SULPHATE

McIver & Son, Alex. M., Charleston, S. C.
Tennessee Corporation, Atlanta, Ga.

MIXERS

Atlanta Utility Works, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

NITRATE OF SODA

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Barrett Division, Allied Chemical & Dye Corp., New York City
Bradley & Baker, New York City.
Chilean Nitrate Sales Corp., New York City.
Huber & Company, New York City.
International Minerals & Chemical Corporation, Chicago, Ill.
McIver & Son, Alex. M., Charleston, S. C.
Schmalts, Jos. H., Chicago, Ill.
Wellmann, William E., Baltimore, Md.

NITRATE OVENS AND APPARATUS

Chemical Construction Corp., New York City.

NITROGEN SOLUTIONS

Barrett Division, Allied Chemical & Dye Corp., New York City

NITROGENOUS ORGANIC MATERIAL

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
DuPont de Nemours & Co., Wilmington, Del.
Huber & Company, New York City.
International Minerals & Chemical Corporation, Chicago, Ill.
McIver & Son, Alex. M., Charleston, S. C.
Smith-Rowland Co., Norfolk, Va.
Wellmann, William E., Baltimore, Md.

NOZZLES—Spray

Monarch Mfg. Works, Philadelphia, Pa.

PACKING—For Acid Towers

Charlotte Chem. Laboratories, Inc., Charlotte, N. C.
Chemical Construction Corp., New York City.

PANS AND POTS

Stedman's Foundry and Mach. Works, Aurora, Ind.

PHOSPHATE MINING PLANTS

Chemical Construction Corp., New York City.

PHOSPHATE ROCK

American Agricultural Chemical Co., New York City.
American Cyanamid Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
Charleston Mining Co., Inc., Richmond, Va.
Huber & Company, New York City.
International Minerals & Chemical Corporation, Chicago, Ill.
Jett, Joseph C., Norfolk, Va.
McIver & Son, Alex. M., Charleston, S. C.
Phosphate Mining Co., The, New York City.
Ruhm, H. D., Mount Pleasant, Tenn.
Schmalts, Jos. H., Chicago, Ill.
Southern Phosphate Corp., Baltimore, Md.
Taylor, Henry L., Wilmington, Del.
Wellmann, William E., Baltimore, Md.

PIPE—Acid Resisting

Durlon Co., Inc., The, Dayton, Ohio.

PIPES—Chemical Stoneware

Chemical Construction Corp., New York City.

PIPES—Wooden

Stedman's Foundry and Mach. Works, Aurora, Ind.

PLANT CONSTRUCTION—Fertilizer and Acid

Chemical Construction Corp., New York City.
Fairlie, Andrew M., Atlanta, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.

POTASH SALTS—Dealers and Brokers

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
Huber & Company, New York City.
International Minerals & Chemical Corporation, Chicago, Ill.
Jett, Joseph C., Norfolk, Va.
Schmalts, Jos. H., Chicago, Ill.
Taylor, Henry L., Wilmington, Del.
Wellmann, William E., Baltimore, Md.

POTASH SALTS—Manufacturers

American Potash and Chem. Corp., New York City.
Potash Co. of America, New York City.
Union Potash & Chemical Co., Chicago, Ill.
United States Potash Co., New York City.

PULLEYS AND HANGERS

Atlanta Utility Works, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

PUMPS—Acid-Resisting

Charlotte Chem. Laboratories, Inc., Charlotte, N. C.
Durlon Co., Inc., The, Dayton, Ohio.
Monarch Mfg. Works, Inc., Philadelphia, Pa.

PYRITES—Brokers

Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., New York City.
Wellmann, William E., Baltimore, Md.

QUARTZ

Charlotte Chem. Laboratories, Inc., Charlotte, N. C.

RINGS—Sulphuric Acid Tower

Chemical Construction Corp., New York City.

ROUGH AMMONIATES

Bradley & Baker, New York City.
McIver & Son, Alex. M., Charleston, S. C.
Schmalts, Jos. H., Chicago, Ill.
Wellmann, William E., Baltimore, Md.

A Classified Index to Advertisers in
"The American Fertilizer"

BUYERS' GUIDE

For an Alphabetical List of all the
Advertisers, see page 33

SCALES—Including Automatic Bagging

Atlanta Utility Works, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

SCRAPERS—Drag

Hayward Company, The, New York City.

SCREENS

Atlanta Utility Works, East Point, Ga.
Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

SEPARATORS—Air

Sackett & Sons Co., The A. J., Baltimore, Md.

SEPARATORS—Including Vibrating

Sackett & Sons Co., The A. J., Baltimore, Md.

SEPARATORS—Magnetic

Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

SHAFTING

Atlanta Utility Works, East Point, Ga.
Link-Belt Company, Philadelphia, Chicago.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

SHOVELS—Power

Link-Belt Company, Philadelphia, Chicago.
Link-Belt Speeder Corp., Chicago, Ill., and Cedar
Rapids, Iowa.
Sackett & Sons Co., The A. J., Baltimore, Md.

SFRAYS—Acid Chambers

Monarch Mfg. Works, Inc., Philadelphia, Pa.

SPROCKET WHEELS (See Chains and Sprockets)

STACKS

Sackett & Sons Co., The A. J., Baltimore, Md.

SULPHATE OF AMMONIA

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Barrett Division, Allied Chemical & Dye Corp., New
York City
Bradley & Baker, New York City.
Huber & Company, New York City.
Hydrocarbon Products Co., New York City.
Jett, Joseph C., Norfolk, Va.
McIver & Son, Alex. M., Charleston, S. C.
Schmaltz, Jos. H., Chicago, Ill.
Taylor, Henry L., Wilmington, N. C.
Wellmann, William E., Baltimore, Md.

SULPHUR

Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Freeport Sulphur Co., New York City.
Texas Gulf Sulphur Co., New York City.

SULPHURIC ACID

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
Huber & Company, New York City.
International Minerals & Chemical Corporation,
Chicago, Ill.
Jett, Joseph C., Norfolk, Va.
McIver & Son, Alex. M., Charleston, S. C.
Taylor, Henry L., Wilmington, N. C.

SULPHURIC ACID—Continued

U. S. Phosphoric Products Division, Tennessee Corp.,
Tampa, Fla.
Wellmann, William E., Baltimore, Md.

SUPERPHOSPHATE

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
Huber & Company, New York City.
International Minerals & Chemical Corporation,
Chicago, Ill.
Jett, Joseph C., Norfolk, Va.
McIver & Son, Alex. M., Charleston, S. C.
Schmaltz, Jos. H., Chicago, Ill.
Taylor, Henry L., Wilmington, N. C.
U. S. Phosphoric Products Division, Tennessee Corp.,
Tampa, Fla.
Wellmann, William E., Baltimore, Md.

SUPERPHOSPHATE—Concentrated

Armour Fertilizer Works, Atlanta, Ga.
International Minerals & Chemical Corporation,
Chicago, Ill.
Phosphate Mining Co., The, New York City.
U. S. Phosphoric Products Division, Tennessee Corp.,
Tampa, Fla.

SYPHONS—For Acid

Monarch Mfg. Works, Inc., Philadelphia, Pa.

TALLOW AND GREASE

American Agricultural Chemical Co., New York City.

TANKAGE

American Agricultural Chemical Co., New York City.
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bradley & Baker, New York City.
International Minerals & Chemical Corporation,
Chicago, Ill.
Jett, Joseph C., Norfolk, Va.
McIver & Son, Alex. M., Charleston, S. C.
Schmaltz, Jos. H., Chicago, Ill.
Smith-Rowland, Norfolk, Va.
Taylor, Henry L., Wilmington, N. C.
Wellmann, William E., Baltimore, Md.

TANKAGE—Garbage

Huber & Company, New York City.

TANKS

Sackett & Sons Co., The A. J., Baltimore, Md.

TILE—Acid-Proof

Charlotte Chem. Laboratories, Inc., Charlotte, N. C.

TOWERS—Acid and Absorption

Chemical Construction Corp., New York City.
Fairlie, Andrew M., Atlanta, Ga.

UNLOADERS—Car and Boat

Hayward Company, The, New York City.
Sackett & Sons Co., The A. J., Baltimore, Md.

UREA

DuPont de Nemours & Co., E. I., Wilmington, Del.

UREA-AMMONIA LIQUOR

DuPont de Nemours & Co., E. I., Wilmington, Del.

VALVES—Acid-Resisting

Atlanta Utility Works, East Point, Ga.
Charlotte Chem. Laboratories, Inc., Charlotte, N. C.
Duriron Co., Inc., The, Dayton, Ohio.
Monarch Mfg. Works, Inc., Philadelphia, Pa.

WHEELBARROW (See Carts)

ZINC SULPHATE

Tennessee Corporation, Atlanta, Ga.

ALPHABETICAL LIST OF ADVERTISERS

For Classified Index, see pages 25 to 32, inclusive

American Agricultural Chemical Co., New York City	21	McLaughlin Gormley King Co., Minneapolis, Minn.	—
American Cyanamid Co., New York City ..	—	Monarch Mfg. Works, Inc., Philadelphia, Pa.	34
American Limestone Co., Knoxville, Tenn. 16		Pacific Coast Borax Co., New York City, 2d cover	
American Potash and Chemical Corp., New York City	4, 23	Phosphate Mining Co., The, New York City —	
Armour Fertilizer Works, Atlanta, Ga. ...	21	Polk Co., R. L., Detroit, Mich.	—
Ashcraft-Wilkinson Co., Atlanta, Ga., Front cover		Potash Co. of America, New York City, 3d cover	
Atlanta Utility Works, East Point, Ga.	—	Ruhm, H. D., Columbia, Tenn.	34
Bagpak, Inc., New York City	—	Sackett & Sons Co., The, A. J., Baltimore, Md.	26
Baker & Bro., H. J., New York City, Back cover		Schmaltz, Jos. H., Chicago, Ill.	34
Barrett Company, The, New York City	—	Shuey & Company, Inc., Savannah, Ga.	34
Bemis Bro. Bag Co., St. Louis, Mo.	3	Smith-Rowland Co., Norfolk, Va.	—
Bradley & Baker, New York City	12	Southern Phosphate Corp., Baltimore, Md. —	
Charleston Mining Co., Inc., Richmond, Va. 4		Stedman's Foundry and Machine Works, Aurora, Ind.	20
Charlotte Chemical Lab., Charlotte, N. C. ...	—	Stillwell & Gladding, New York City	—
Chemical Construction Corp., New York City	23	Synthetic Nitrogen Products Co., New York City	—
Chilean Nitrate Education Bureau, New York City	—	Taylor, Henry L., Wilmington, N. C.	28
Dickerson Co., The, Philadelphia, Pa.	22	Tennessee Corporation, Atlanta, Ga.	—
Dougherty, Jr., E., Philadelphia, Pa.	33	Texas Gulf Sulphur Co., New York City ..	17
Du Pont de Nemours & Co., E. I., Wilmington, Del.	—	Union Potash & Chemical Co., Chicago, Ill. 14	
Duriron Co., The, Dayton, Ohio	—	U. S. Phosphoric Products Division, Tennessee Corp., Tampa, Fla.	23
Fairlie, Andrew M., Atlanta, Ga.	29	United States Potash Co., New York City ..	19
Farmers Fertilizer Co., Columbus, Ohio	34	Wellmann, William E., Baltimore, Md.	25
Freeport Sulphur Co., New York City	18	Wiley & Company, Inc., Baltimore, Md. ...	34
Gascoyne & Co., Inc., Baltimore, Md.	34		
Hayward Company, The, New York City ..	34		
Huber Co., L. W., New York City	24		
Hydrocarbon Products Co., New York City 15			
International Minerals Chemical Corp., Chicago, Ill.	—		
Jeffrey Mfg. Co., The, Columbus, Ohio	—		
Jett, Joseph C., Norfolk, Va.	34		
Keim, Samuel D., Philadelphia, Pa.	33		
Link-Belt Company, Chicago, Ill.	—		
McIver & Son, Alex. M. Charleston, S. C. ..	25		

SAMUEL D. KEIM

By-Products and Fertilizer Materials

(SINCE 1898)

1612 MARKET STREET
PHILADELPHIA, PENNA.

E. DOUGHERTY, JR., Manager

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.

MONARCH SPRAYS



This is our Fig. 645 Nozzle. Used for Scrubbing Acid Phosphate Gases. Made for "full" or "hollow" cone in Brass and "Everdur." We also make "Non-Clog" Nozzles in Brass and Steel, and Stoneware Chamber Sprays now used by nearly all chamber spray sulphuric acid plants.
CATALOG 6-C

MONARCH MFG. WORKS, INC.

Westmoreland and Emery Sts., Philadelphia, Pa.

FOR SALE

UP TO 5,000 ACRES OF TENNESSEE
PHOSPHATE LANDS

Mineral Rights or Fee Simple
BEST AND SAFEST PLACE TO INVEST
IDLE MONEY

H. D. RUHM

COLUMBIA, TENN.

SHUEY & COMPANY, Inc.

Specialty: Analysis of Fertilizer Materials and Phosphate Rock. Official Chemists for both Florida Hard Rock Phosphate and Pebble Phosphate Export Associations. Official Weigher and Sampler for the National Cottonseed Products Association at Savannah; also Official Chemists for National Cottonseed Products Association.
115 E. BAY STREET, SAVANNAH, GA.

JETT
BROKER

ALL FERTILIZER MATERIALS

FISH SCRAP for Fertiliser and Fish Meal for Feed, Nitrate of Soda, Sulphate of Ammonia, Potash Salts, Superphosphate (Acid Phosphate), Meals, South American and Domestic Tankage and Blood, Foreign Fish Guano.

JOS. C. JETT

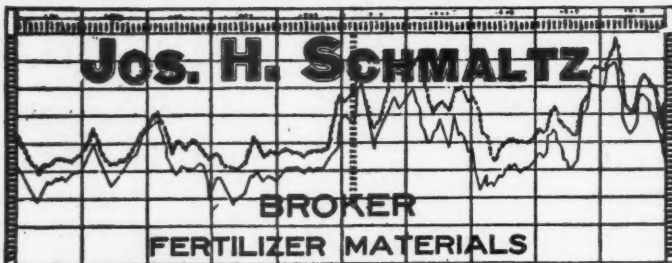
Board of Trade
Building
NORFOLK, VA.

WILEY & COMPANY, Inc.

Analytical and Consulting
Chemists

BALTIMORE, MD.

Tankage
Blood
Bone
All
Ammoniates



OFFICIAL BROKER FOR MILORGANITE

327
South
La Salle
Street
CHICAGO

Hayward Buckets



Use this Hayward Class "K" Clam Shell for severe superphosphate digging and handling.
THE HAYWARD CO., 302 Fulton St., New York

The Farmers Fertilizer Co.

Manufacturers

COMPLETE FERTILIZERS

BULK SUPERPHOSPHATE

SULPHURIC ACID

Acid plant capacity, 45,000 tons. Fertilizer plant capacity, 50,000 tons

Get in touch with us.

COLUMBUS, OHIO

GASCOYNE & CO., INC.

Established 1887

Chemists and Assayers

Public Weighers and Samplers

27 South Gay Street - BALTIMORE, MD.

Knowledge OF AGRICULTURAL CHEMISTRY, SOILS, MANURES, etc., is essential to manufacturers of Commercial Fertilizers : : Books covering these subjects may be obtained from

WARE BROS COMPANY

1330 Vine St., Philadelphia

**P.C.A. Red Muriate is ideal in your plant
operation--Uniform in color--Uniform
in analysis--Uniform in grain size.**

*Granular Muriate of Potash
Muriate of Potash 50% and 60%
Manure Salts*



POTASH COMPANY
of America

GENERAL SALES OFFICE 50 BROADWAY NEW YORK CITY

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.

92 YEARS OF SERVICE



H. J. BAKER & BRO.

271 Madison Ave., NEW YORK

BALTIMORE - CHICAGO - SAVANNAH - TAMPA

Sole Distributors of

DRIED ACTIVATED SLUDGE
SANITARY DISTRICT of CHICAGO

IMPORTERS

EXPORTERS

POTASH SALTS
SULPHATE of AMMONIA
NITRATE of SODA
PERUVIAN BIRD GUANO
FISH MEAL, BONE MEAL
TANKAGE, BLOOD
NITROGENOUS
AND ALL OTHER
FERTILIZER MATERIALS

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.

